

*SYMPHURUS PROLATINARIS*, A NEW SPECIES OF  
SHALLOW-WATER TONGUEFISH  
(PLEURONECTIFORMES: CYNOGLOSSIDAE)  
FROM THE EASTERN PACIFIC

Thomas A. Munroe, Martha S. Nizinski, and M. N. Mahadeva

*Abstract.* — *Symphurus prolatinaris* is described from 201 specimens collected in shallow waters on the continental shelf (9–162 m, 96% taken between 13 and 42 m) from northern Mexico to central Peru. A medium-sized tonguefish, *S. prolatinaris* attains maximum lengths of 161 mm SL, with females maturing at ca. 98 mm SL. The new species is characterized by a predominant 1-5-3-2-2 pattern of interdigitation of dorsal pterygiophores and neural spines; 12 caudal-fin rays; 102–112 dorsal-fin rays; 85–93 anal-fin rays; 54–58 total vertebrae; four hypurals; a lightly-pigmented, triangular, veil-like pupillary operculum; 3–8 small, ctenoid scales on the blind sides of dorsal- and anal-fin rays; a pronounced, tubular, anterior nostril on the blind side; the first dorsal-fin ray located anterior to a vertical through the front margin of the upper eye; and the ocular-side lower jaw without a pronounced fleshy ridge on its posterior extent. *Symphurus prolatinaris* is most similar to *S. chabanaudi* Mahadeva & Munroe, but differs notably from that species in possessing a pupillary operculum, in pigmentation, and in its more anteriorly placed dorsal fin.

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Recent studies of symphurine tonguefishes occurring in warm temperate and tropical neritic waters of the eastern Pacific Ocean (Munroe & Mahadeva 1989, Mahadeva & Munroe 1990, Munroe & Nizinski 1990) indicate that tonguefishes of the genus *Symphurus* are considerably more diverse in this region than previously reported (Meek & Hildebrand 1928, Hildebrand 1946, Mahadeva 1956, Chirichigno 1974). To date, over 17 nominal species have been described from eastern Pacific locations, and the examination of tonguefishes collected in relatively shallow waters between northern Mexico and Peru has revealed yet another undescribed species from this area.

In his dissertation, Mahadeva (1956:172) examined a tonguefish specimen (LACM 20406) that he was unable to identify. This specimen had counts comparable to those

of an undescribed species, later described as *S. chabanaudi* Mahadeva & Munroe, 1990, but differed from that species in body pigmentation, in possessing a thin, veil-like pupillary operculum (absent in *S. chabanaudi*), in features of its gill-arch morphology, and in the more-anteriorly placed dorsal-fin. Noting the differences between this specimen and those of *S. chabanaudi*, Mahadeva was unable to positively identify this specimen and he listed it as *incertae sedis*.

Since Mahadeva's study (1956), significant collections of tonguefishes have been made throughout eastern Pacific coastal seas from Mexico to northern South America. From this material, we now have identified an additional 200 specimens matching characteristics of the *incertae sedis* specimen listed in Mahadeva's study and have determined that these specimens represent

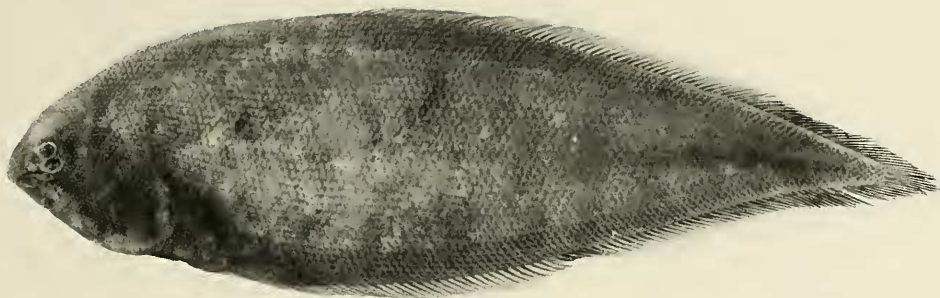


Fig. 1. *Symphurus prolatinaris*, new species, holotype, USNM 308408, male, 112.8 mm SL; Colombia, 4°20'–4°18'N, 77°28'–77°29'W.

an undescribed species. A formal description of the new species is presented at this time.

*Methods.*—Type and non-type specimens of the new species are deposited in the following institutions: California Academy of Sciences (CAS); National Museum of Natural History (USNM); Natural History Museum of Los Angeles County (LACM); Scripps Institution of Oceanography, Marine Vertebrate Collection (SIO); University of California at Los Angeles (UCLA); University of Arizona (UA); Instituto del Mar del Peru (IMARPE); and Universidad de Costa Rica, Museo de Zoología (UCR).

Counts and measurements follow Munroe & Mahadeva (1989) and Munroe (1990). Standard length (SL) is used throughout. Morphometric ratios are expressed in thousandths of SL or thousandths of head length. Abbreviations are: ID pattern—interdigitation pattern of dorsal pterygiophores and neural spines; BD—body depth; PAL—pre-anal length; CFL—caudal-fin length; PL—pelvic-fin length; DBL—dorsal-fin length; PDL—predorsal length; ABL—anal-fin length; HL—head length; HW—head width; POL—postorbital length; UHL—upper head lobe width; LHL—lower head lobe width; SNL—snout length; UJL—upper jaw length; ED—eye diameter; CD—chin depth.

All descriptions of pigmentation are based

on fish fixed in formalin and stored in ethyl or isopropyl alcohol. Size at maturity was estimated by macroscopic examination of the extent of posterior elongation of the ovaries (ovaries of mature females are often conspicuous through the body wall when light is transmitted from beneath the specimen; in immature females, developing ovaries are best observed by dissection). Since no obvious differences in testicular size were apparent in males, estimates of maturity were based entirely on females. Depth of capture (in feet or fathoms) was transformed to the nearest meter. If depth included a range of depths over which the nets were towed, an average depth for that particular trawl was calculated.

*Symphurus prolatinaris*,  
new species

Figs. 1, 2a, 3–4, Tables 1–3

*Holotype.*—USNM 308408 (male, 112.8 mm); Colombia, off Rio Togoroma, 4°20'–4°18'N, 77°28'–77°29'W, 9 m, 6 Nov 1970. Collected by L. Knapp with 50 ft shrimp trawl, R/V *Inderena*, Cruise 7010, Station 344.

*Paratypes.*—(Measured and counted 24 specimens; 103.8–161 mm): Mexico.—SIO 65-158 (2, 123.2–129.2), Sinaloa, Isla Altamura, 24°37.5'N, 108°13.5'W, 27 m, 26

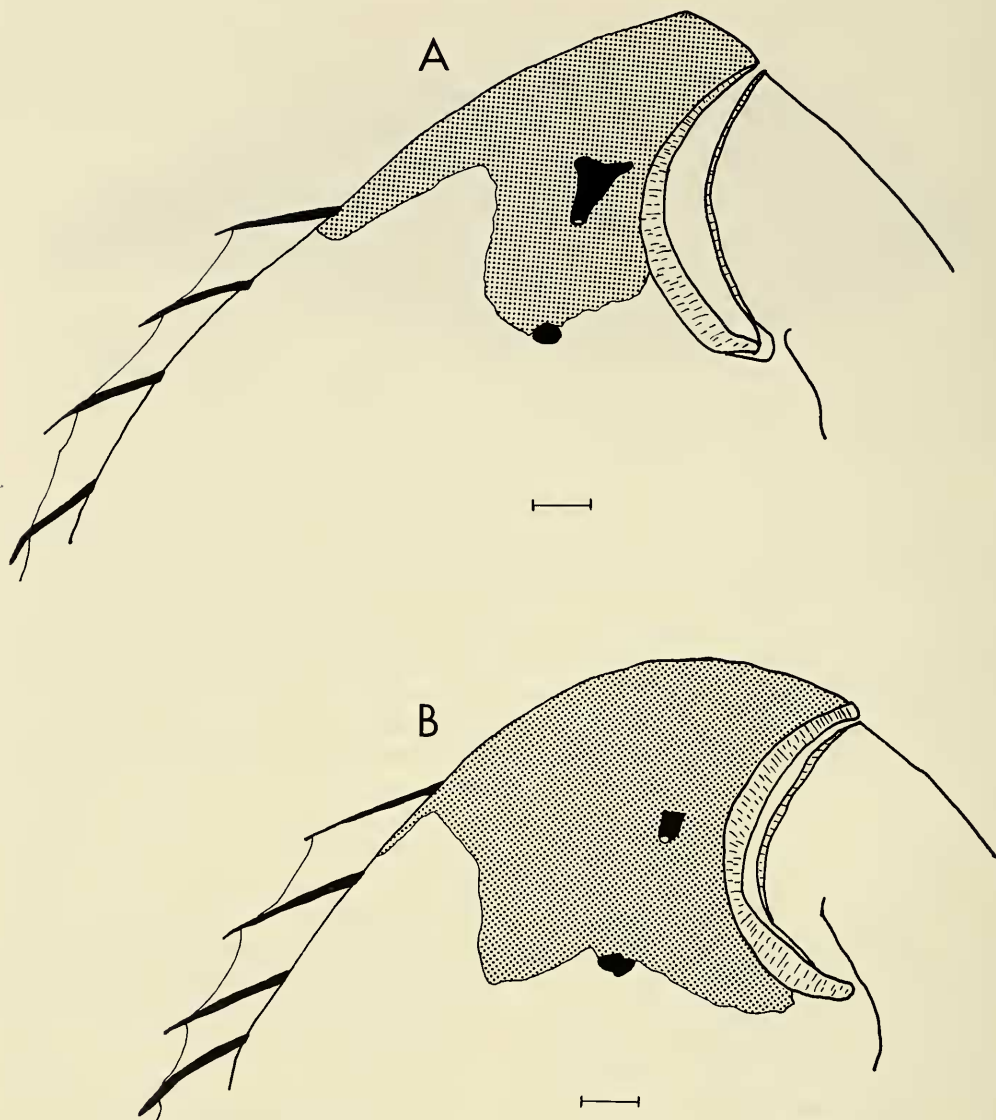


Fig. 2. Lateral view of the blind side of the head highlighting differences in head shape, relative size of the anterior nostril (in black), and relative position of the first dorsal-fin ray (in black) between two eastern Pacific species of *Symphurus*. A) *S. prolatinaris* (USNM 308408). B) *S. melanurus* (UCLA W53-289). Scale bar equals one millimeter.

May 1965. SIO 60-87 (2, 82.1-144.6), approximately off Río San Pedro mouth, 21°46.4'N, 105°25.2'W to 21°50.5'N, 105°44.9'W, 18 m, 8-9 Mar 1960. UA 67-71-9 (2, 110.0-134.0), Sinaloa, Golfo de California, Mazatlan harbor, 20 Sep 1967. SIO 63-517 (122.1), Golfo de Tehuantepec,

14°45'N, 92°35'W, 19 m, 11 Jul 1963. Guatemala.—LACM 20406 (103.8), off San Jose light, 23 Mar 1939. El Salvador.—USNM 308409 (5, 123.6-136.7), Saite, 26 m, 28 Oct 1975. SIO 73-276 (119.8), ca. SW of Punta Amapala (west point of Golfo de Fonseca), 13°5.1-6.5'N, 87°57.6-59.5'W, 27

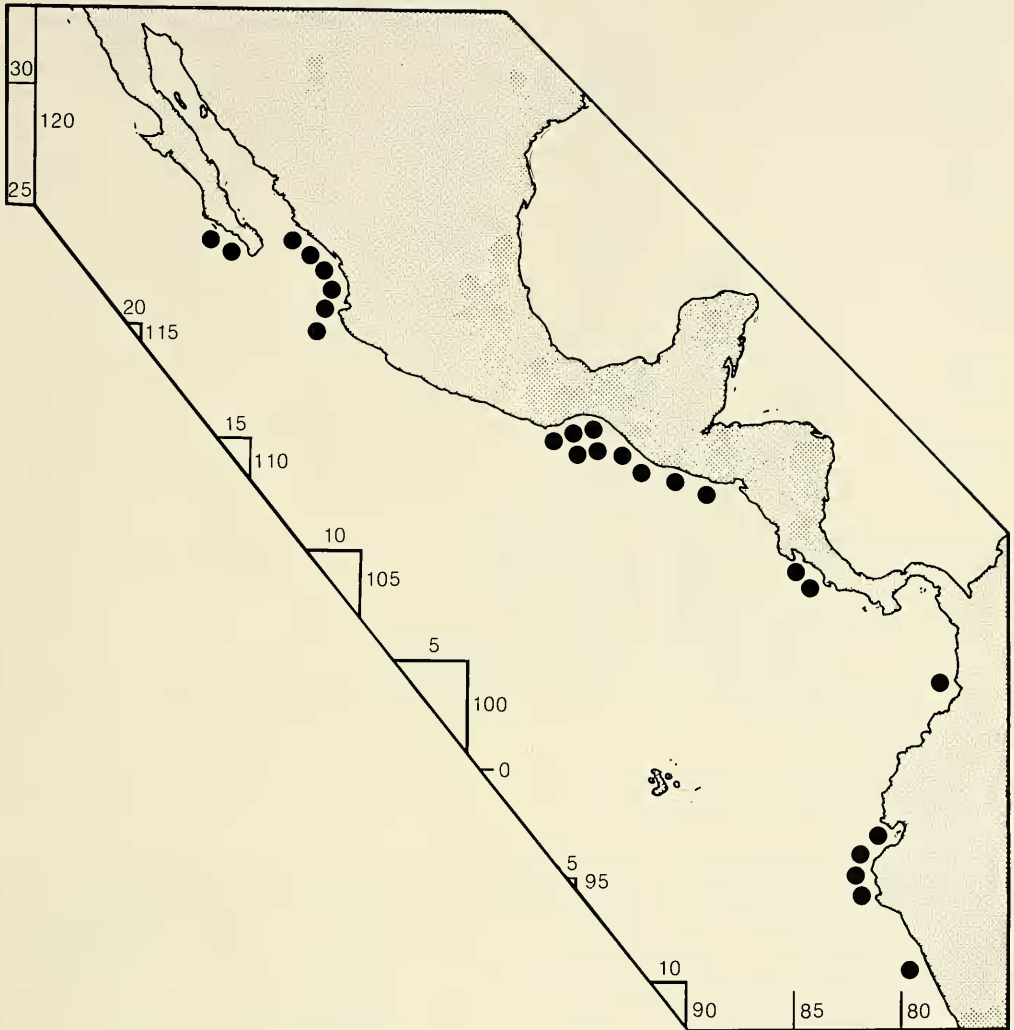


Fig. 3. Geographic distribution of *Symphurus prolatinaris* based on available study material. Dots may represent more than one collection locality and more than a single specimen from each locality.

m, 17 Apr 1973. Costa Rica.—UCR 1286-10 (116.1), Golfo de Nicoya, in front of Puntarenas Hospital, 16 m, 25 Jul 1979. Ecuador.—CAS 24942 (6, 109.5–125.6), 3°39'00"S, 80°41'00"W, 13 m, 10 Sep 1966. Peru.—CAS 24925 (139.3), 4°51'00"S, 81°20'00"W, 34 m, 2 Jun 1966. CAS 24944 (115.4), 4°48'00"S, 81°17'00"W, 27 m, 2 Jun 1966. IMARPE 67-2337 (161.0), Playa Tortugas, Chimbote, 9 Nov 1967.

Counts but not morphometric information were also taken from the following 112

paratypes (37.8–144.7 mm): Mexico.—SIO 64-877 (4, 50.4–59.8), Baja California Sur, 2 mi SW of Isla Santa Margarita SW of Cerro Santa Margarita on SE end, 24°19.6–19.8'N, 111°46.4–47.1'W, 52 m, 13 Nov 1964. SIO 62-707 (51.5), Baja California Sur, 12½ mi NW of Marquis Pt., 24°05.1'N, 111°02.0'W to 24°06.1'N, 111°03.1'W, 19 m, 4 Dec 1962. UCLA W62-45 (4, 106.2–124.0), Sinaloa, Golfo de California, N of Mazatlan, 27 Feb 1962. UCLA W58-3 (86.3), Nayarit, 1–3 mi N of Ensenada Chi-

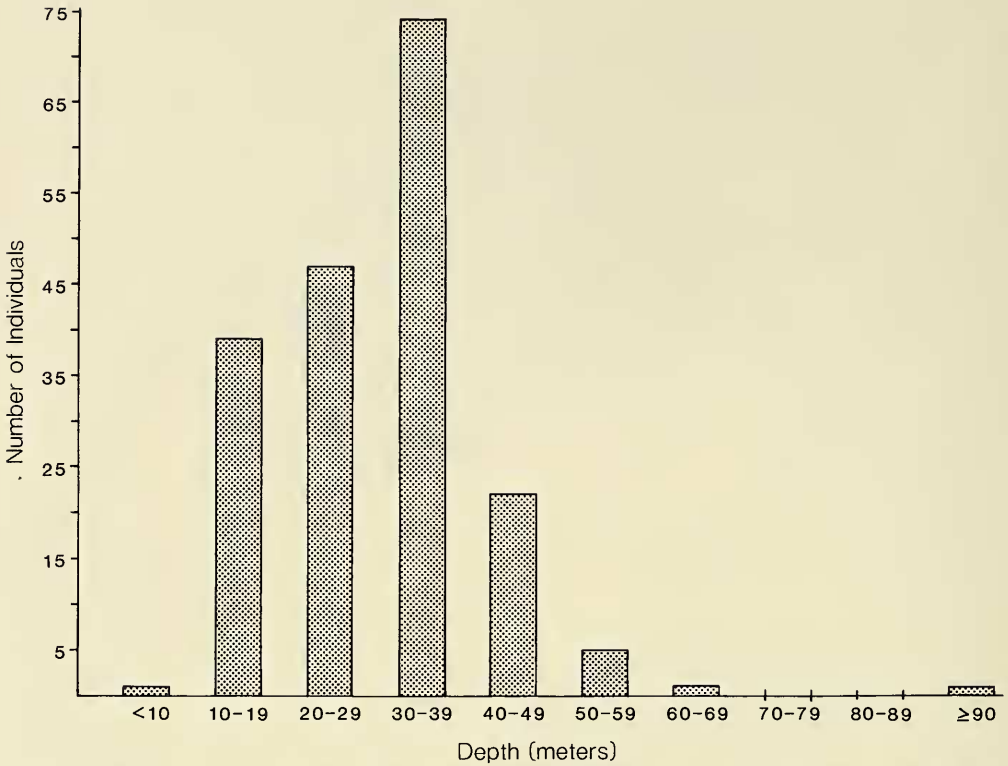


Fig. 4. Frequency histogram of bathymetric occurrence of *Symphurus prolatinaris*. Data are based on numbers of individuals taken at each depth interval.

cala, 22 Jan 1958. SIO 62-70 (83.9), off Nayarit, 22°00.5'N, 105°44.8'W, 29 m, 24 Aug 1961. SIO 62-50 (68.0), Banderas Bay, 20°45.2'N, 105°22.6'W to 20°43.0'N, 105°21.8'W, 24 m, 21 Aug 1961. SIO 65-160 (2, 57.0-72.0), Banderas Bay, 20°44'N, 105°24.6'W, 30 m, 2 Jun 1965. SIO 65-167 (28, 79.1-132.7), Golfo de Tehuantepec, 16°07'N, 95°07'W, 19 m, 7 Jun 1965. SIO 63-501 (12, 73.9-132.8), Oaxaca, Golfo de Tehuantepec, 16°06'N, 95°08'W, 28 m, 8 Jul 1963. SIO 63-502 (8, 62.5-138.6), Golfo de Tehuantepec, 16°02.5'N, 95°07.5'W, 34 m, 8 Jul 1963. SIO 63-503 (3, 83.3-91.6), Oaxaca, Golfo de Tehuantepec, off Salina Cruz, 16°02.5'N, 95°02.5'W, 37 m, 8 Jul 1963. SIO 79-10 (10, 68.5-89.5), off Salina Cruz, Oaxaca, 15°58.5'N, 95°0.76'W to 16°00'N, 95°09.3'W, 41 m, 6 Apr 1978. SIO 63-504 (92.8), Golfo de Tehuantepec, Oaxaca, off Salina Cruz, 15°57.5'N, 95°00'W,

62 m, 8 Jul 1963. SIO 63-507 (79.7), Golfo de Tehuantepec, Oaxaca, off Salina Cruz, 15°50'N, 95°07.5'W, 162 m, 9 Jul 1963. SIO 63-521 (66.2), Golfo de Tehuantepec, 15°41'N, 96°07.5'W, 56 m, 14 Jul 1963. Costa Rica.—LACM 42893-3 (90.6), near Pta. Coyote, 9°44'60"-9°43'42"N, 85°17'42"-85°17'18"W, 31 m, 13 May 1973. SIO 73-297 (73.0), west coast, immediately east of Pta. Judas at east side of entrance of Golfo de Nicoya, 9°27.5'-28.3'N, 84°21.7-24.2'W, 26 m, 22 Apr 1973. SIO 73-298 (30, 37.8-144.7), west coast, SSW off Pta. Judas, eastern point of entrance to Golfo de Nicoya, 9°27.5'N, 84°30.7'W, 31 m, 22 Apr 1973. Peru.—IMARPE 66-2146 (123.0), 5°00'30"S, 81°24.5'W, 3 Jun 1966. UCLA W59-63 (102.2), anchorage at inner harbor, Salaverry (ca. 8°14'S, 79°00'W), 3 Nov 1958.

*Diagnosis.*—A medium-sized tonguefish, attaining maximum lengths of 161 mm, with

Table 1.—Summary of selected meristic features examined in specimens of *Symphurus prolatinaris*. (Asterisks indicate values for holotype.)

Dorsal-fin rays														
	102	103	104	105*	106	107	108	109	110	111	112	$\bar{X}$		
Frequency	1	3	9	34	28	17	13	2	1	—	1	106.0		
Anal-fin rays														
	85	86	87	88*	89	90	91	92	93	$\bar{X}$				
Frequency	1	2	15	34	32	19	4	1	2	88.7				
Caudal-fin rays														
	10	11	12*	13	$\bar{X}$									
Frequency	2	3	93	4	12.0									
Total vertebrae														
	54	55	56*	57	58	$\bar{X}$								
Frequency	6	47	50	4	2	55.5								
Longitudinal scale rows														
	88	89	90	91	92*	93	94	95	96	97	98	99	100	$\bar{X}$
Frequency	4	4	8	10	15	11	18	5	1	7	3	2	3	93.1
Transverse scale count														
	37	38*	39	40	41	42	43	44	45	$\bar{X}$				
Frequency	2	7	10	19	22	10	5	5	1	40.6				
Head scale rows														
	19	20	21	22	23	$\bar{X}$								
Frequency	1	32	46	21	5	21.0								

	Pattern	Frequency	%
Interdigitation pattern	1-5-3-2-2*	88	80.7
	1-6-3-2-2	5	4.6
	1-5-4-2-2	4	3.7
	1-4-3-2-2	3	2.8
	1-5-3-3-2	3	2.8
	1-6-2-2-2	3	2.8
	1-5-2-2-2	2	1.8
	1-4-4-2-2	1	0.9

females maturing at sizes from 98 mm; characterized by a 1-5-3-2-2 ID pattern; 12 caudal-fin rays; 102–112 dorsal-fin rays; 85–93 anal-fin rays; 54–58 total vertebrae; four hypurals; lightly-pigmented, triangular, veil-like pupillary operculum; 3–8 small, ctenoid scales on blind sides of the dorsal- and anal-fin rays; unpigmented peritoneum; pronounced tubular anterior nostril on the blind side (Fig. 2); first dorsal-fin ray anterior to

vertical through front margin of upper eye; and ocular-side lower jaw usually without a pronounced fleshy ridge on its posterior portion.

*Description.*—Frequency distributions of meristic data are given in Table 1. ID pattern typically 1-5-3-2-2 (88/108 specimens), less frequently 1-6-3-2-2, 1-4-3-2-2, 1-5-4-2-2, 1-5-3-3-2, 1-6-2-2-2, 1-5-2-2-2, or 1-4-4-2-2. Caudal-fin rays 12 (93/102),

Table 2.—Summary of morphometrics expressed as thousandths of Standard Length (except SL in mm) for the holotype (USNM 308408) and 24 paratypes of *Symphurus prolatinaris*. (Abbreviations defined in text.)

Character	Holotype	Paratypes		
		Range	Mean	SD
SL	112.8	103.8–161.0	124.0	12.94
BD	302	259–300	284.0	10.28
PDL	42	21–41	28.2	5.23
PAL	211	165–244	217.5	17.39
DBL	958	959–979	971.4	5.33
ABL	805	745–827	787.1	18.34
PL	78	45–70	58.8	7.04
CFL	99	73–101	91.8	6.37
HL	193	154–214	192.7	12.15
HW	232	208–269	237.0	13.84
POL	128	92–144	127.1	12.01
SNL	43	31–46	38.2	3.88
UJL	47	37–55	44.4	4.21
ED	20	15–21	18.0	1.67
CD	56	40–61	46.7	5.39
UHL	146	118–154	138.1	9.94
LHL	111	94–133	112.3	8.80

rarely 10, 11, or 13. Dorsal-fin rays 102–112, usually 104–108,  $\bar{X} = 106.0$ . Anal-fin rays 85–93, usually 87–90,  $\bar{X} = 88.7$ . Pelvic-fin rays 4. Total vertebrae 54–58, usually 55–56, occasionally 54 or 57, rarely 58,  $\bar{X} = 55.5$ ; abdominal vertebrae 9 (3+6). Hypurals 4 (109/109). Longitudinal scale rows 88–100, usually 90–97,  $\bar{X} = 93.1$ . Scale rows on head posterior to lower orbit 19–23, usually 20–22,  $\bar{X} = 21.0$ . Transverse scales 37–45, usually 39–42,  $\bar{X} = 40.6$ .

Summaries of morphometric data are provided in Tables 2–3. Body relatively deep (259–302 SL,  $\bar{X} = 284$ ); greatest depth in anterior one-third to one-half of body; body tapering fairly rapidly posterior to midpoint. Preanal length 165–244 SL,  $\bar{X} = 218$ ; shorter than body depth. Head relatively wide (208–269 SL,  $\bar{X} = 237$ ); somewhat less than body depth. Head length (154–214 SL,  $\bar{X} = 193$ ); shorter than head width (HW/HL 1.08–1.35,  $\bar{X} = 1.24$ ). Postorbital length 92–144 SL,  $\bar{X} = 127$ . Lower head lobe (94–133 SL,  $\bar{X} = 112$ ) nearly equal to postorbital

Table 3.—Summary of morphometrics expressed as thousandths of Head Length (except HW/HL) for the holotype (USNM 308408) and 24 paratypes of *Symphurus prolatinaris*. (Abbreviations defined in text.)

Character	Holotype	Paratypes		
		Range	Mean	SD
HW/HL	1.20	1.08–1.35	1.24	0.12
POL	661	477–707	660.1	46.31
SNL	225	159–242	199.0	20.86
UJL	243	189–266	230.2	17.55
ED	101	80–105	94.1	7.78
CD	289	205–294	242.9	27.42
UHL	757	604–891	719.5	63.29
LHL	573	534–689	583.5	38.98
PDL	216	108–210	146.5	27.06

length; slightly smaller than upper head lobe (118–154 SL,  $\bar{X} = 138$ ). Snout relatively short, 159–242 HL,  $\bar{X} = 199$ ; covered with small ctenoid scales. Dermal papillae well developed on blind side of snout. Anterior nostril on ocular side relatively short; when extended posteriorly usually falling just short of vertical through anterior margin of lower eye. Anterior nostril on blind side conspicuously long and tubular; usually readily distinguishable from dermal papillae on blind side of snout (Fig. 2). Mouth relatively large, 189–266 HL,  $\bar{X} = 230$ ; posterior margin of maxilla usually reaching vertical through posterior margin of pupil, or posterior margin of lower eye. Chin depth 205–294 HL,  $\bar{X} = 243$ ; slightly greater than snout length. Lower eye relatively small, 80–105 HL,  $\bar{X} = 94$ ; eyes usually slightly sub-equal in position with upper slightly in advance of lower eye. Anterior and medial surfaces of eyes partially covered with 3–4 rows of small ctenoid scales; 3–5 small ctenoid scales in narrow interorbital region. Pupillary operculum not well developed, only faintly pigmented, usually triangular and veil-like in appearance (not readily visible in small specimens or those preserved for long periods). Length of dorsal-fin base 958–979 SL,  $\bar{X} = 971$ . Dorsal-fin origin far forward, with first dorsal-fin ray anterior to vertical through anterior margin of upper eye; pre-

dorsal length relatively short, 21–42 SL,  $\bar{X}$  = 28. Length of anal-fin base 745–827 SL,  $\bar{X}$  = 787. Blind sides of dorsal and anal fins with 3–8 small, ctenoid scales extending to about mid-point of fin rays. Pelvic fin relatively short, 45–78 SL,  $\bar{X}$  = 59; longest pelvic-fin ray, when extended posteriorly, usually reaching first anal-fin ray. Caudal fin relatively short, 73–101 SL,  $\bar{X}$  = 92.

Teeth well developed on blind-side dentary and premaxilla. Teeth on ocular-side premaxilla poorly developed, slender, in single row, usually covering only anterior-most one-fifth of bone. Teeth on ocular-side dentary usually absent, occasionally with few teeth present on anterior one-fourth of bone.

*Pigmentation.*—Light to dark brown background coloration with occasional crossbanding. Crossbands short, nearly always incomplete and offset, not continued onto dorsal- and anal-fin rays. Crossbands on body 5–15 in number; narrow, usually only 3–8 scale rows wide; beginning immediately posterior to opercular opening and continuing to base of caudal fin. Head occasionally with two crossbands about 4–6 scale rows wide; anterior crossband immediately posterior to eyes; posterior band crossing distal margin of operculum. Outer surface of ocular-side operculum usually with same background coloration as body; occasional specimens with dusky blotch on ocular-side opercle resulting from dark pigment of inner opercular lining showing through to outside. Inner linings of both opercles pigmented; that of ocular side always more heavily pigmented; most specimens usually with pigment only on ventral half of inner opercular lining on blind side of body. Isthmus heavily spotted on both sides of body. Ocular-side upper lip usually with heavier concentration of melanophores than lower lip; occasional specimens with dark pigment band on upper lip. Blind side uniformly off-white to yellowish. Peritoneum unpigmented.

Dorsal and anal fins without obvious blotches or spots, but becoming increasingly

darker on posterior one-third to posterior one-half of body. Membrane between fin rays usually lighter than membrane covering fin rays, thereby clearly outlining each fin ray. Caudal-fin rays and membrane uniformly darkly pigmented; middle caudal-fin rays occasionally whitish at tip.

*Size and sexual maturity.*—Of 97 females, 77, ranging from 65.8 to 161.0 mm, are mature with elongate, ripening, or gravid ovaries. The smallest gravid females measure 96.8, 101.0, and 102.2 mm. Twenty females (50.4–75.6 mm) are immature with ovaries in some phase of elongation. In four of the smallest females (53.5–57.6 mm), ovaries have just begun to elongate, while in 16 others (50.4–75.6 mm), ovaries are only slightly elongate. Males ( $N = 99$ ) are only slightly smaller (50.8–144.7 mm) than females (50.4–161.0 mm). Sex was not determined for three individuals ranging from 37.8 to 42.9 mm.

*Etymology.*—The name *prolatinaris* is from the Latin *prolatus* (= elongated) and *naris* (= nostril), in reference to the elongate, blind-side anterior nostril characteristic of this species. The specific epithet is treated as a noun in apposition.

*Geographic and bathymetric distribution.*—*Symphurus prolatinaris* occurs throughout the tropical and warm temperate coastal waters of the eastern Pacific (Fig. 3), from the southwestern coast of Baja California Sur (24°19.6–19.8'N, 111°46.4–47.1'W) to central Peru (ca. 9°S, 78.5°W). We did not find any specimens of this species among tonguefishes we examined that were collected from within the Gulf of California. The majority of specimens of *S. prolatinaris* were collected from coastal waters of Mexico and Central America. The two northernmost collections, off Baja California Sur, contained only five specimens. Six of seven lots collected south of 5°N latitude contained only solitary individuals, while the seventh collection from this region comprised six specimens. Disjunctions in the distribution indicated in Fig. 3 are pre-



sumed to be an artifact of different collecting intensities, and at this time there is no a priori reason to assume that *S. prolatinaris* does not occur in those regions.

*Symphurus prolatinaris* has been collected on the inner continental shelf at depths ranging from 9 to 162 m (USNM 308408 and SIO 63-507, respectively). However, based on frequency of capture and relative abundance (Fig. 4), the bathymetric center of occurrence for this species is between 13 and 42 m, where 96% (189 of 197) of the specimens were captured. Only eight specimens, one each captured at the extremes of the depth range (9 m and 162 m, respectively) and six specimens taken between 52–62 m, were collected beyond the 13–42 m depth range.

*Geographical variation.*—Compared with some other eastern Pacific tonguefishes (Mahadeva 1956, Mahadeva & Munroe 1990), little geographic variation was noted in the numbers of dorsal- and anal-fin rays and total vertebrae for the specimens examined.

*Co-occurring Symphurus species.*—*Symphurus prolatinaris* has been collected with several other species of *Symphurus*, including *S. melanurus* Clark, *S. chabanaudi*, *S. callopterus* Munroe & Mahadeva, *S. williamsi* Jordan & Culver, and *S. melasmatotheca* Munroe & Nizinski.

*Comparisons.*—*Symphurus prolatinaris* is one of eight species of *Symphurus* characterized by a 1-5-3-2-2 ID pattern. All *Symphurus* species with this dorsal pterygiophore arrangement co-occur in shallow, warm-temperate and tropical waters of the eastern Pacific. Among these eight species, *S. prolatinaris* is distinguished in having the combination of high dorsal- and anal-fin ray and total vertebral counts, and a pupillary operculum. Ranges for dorsal- and anal-fin ray counts in *S. prolatinaris* scarcely overlap those for *S. atricaudus*, *S. melasmatotheca*, and *S. williamsi*, and there is no overlap in total vertebrae counts between these species. *Symphurus prolatinaris* has 102–112

dorsal-fin rays (versus 102 or fewer in these other three species); 85–93 anal-fin rays (versus 85 or less); and 54–58 total vertebrae (versus 53 or less). *Symphurus prolatinaris* differs further from *S. melasmatotheca* in having 12 caudal-fin rays (versus 11 in *S. melasmatotheca*), an unpigmented peritoneum (versus black), 3–8 small ctenoid scales on blind sides of the dorsal- and anal-fin rays (versus scales absent), a lightly-pigmented, veil-like pupillary operculum (versus darkly pigmented, well-developed pupillary operculum), and the first dorsal-fin ray anterior to the vertical through the front margin of the upper eye (versus first dorsal-fin ray at a point between the verticals through the mid-eye and posterior margin of the upper eye in *S. melasmatotheca*).

There is some overlap between the dorsal- and anal-fin ray and total vertebrae counts of *S. prolatinaris* and *S. melanurus*. However, counts for *S. prolatinaris* range higher (dorsal-fin rays 102–112 versus 95–103 in *S. melanurus*; anal-fin rays 85–93 versus 78–87; and 54–58 total vertebrae versus 50–54). Despite overlap in some meristic features, these species differ in many other anatomical features, including the size of the blind-side anterior nostril, which in *S. prolatinaris* is pronounced, elongate, and tubular, and is distinctly visible from the dermal papillae covering the blind-side snout. The blind-side anterior nostril of *S. melanurus*, in contrast, is a short, rounded, nub-like structure that is never as distinct as that of *S. prolatinaris* and frequently is hardly distinguishable from the dermal papillae on the blind-side snout (see Fig. 2). *Symphurus prolatinaris* also lacks the well-developed fleshy ridge on the posterior portion of the ocular-side lower jaw that is evident in *S. melanurus*. Furthermore, in *S. prolatinaris*, the blind sides of the dorsal- and anal-fin rays have about 3–8 small, ctenoid scales extending to about the mid-point of the fin rays, while in *S. melanurus* there are either no scales present, or at most, the blind sides of the dorsal- and anal-fin

rays have 1–2 small ctenoid scales present only along basal portions of fin rays.

Dorsal- and anal-fin ray, and vertebral counts of *S. prolatinaris* overlap extensively those of the three remaining eastern Pacific tonguefishes characterized by a 1-5-3-2-2 ID pattern (*S. undecimplerus* Munroe & Nizinski, *S. elongatus* (Günther), and *S. chabanaudi*). *Symphurus prolatinaris* differs from *S. undecimplerus* primarily in caudal-fin ray counts (12 versus 11 in *S. undecimplerus*), presence of scales on the blind sides of the dorsal- and anal-fin rays (versus their absence), by its smaller eye (80–105 HL versus 104–153 HL), and in its modally higher counts for dorsal-fin rays (102–112 versus 97–105), anal-fin rays (85–93 versus 80–87), and total vertebrae (54–58 versus 52–56).

Fin-ray and vertebral counts of *S. prolatinaris* completely overlap those of *S. elongatus* and *S. chabanaudi*. However, the new species is distinct from these other species. *Symphurus prolatinaris* differs from *S. elongatus* primarily in having a pupillary operculum and small ctenoid scales on the blind sides of the dorsal- and anal-fin rays (both characters absent in *S. elongatus*), a larger eye (15–21 SL versus 9–15 SL in *S. elongatus*), and a larger anterior nostril on the blind side relative to that of *S. elongatus*. *Symphurus prolatinaris* differs most notably from *S. chabanaudi* in possessing a pupillary operculum (absent in *S. chabanaudi*) and in lacking a large, dark-brown or black blotch on the outer surface of the ocular-side opercle (present in *S. chabanaudi*). Also, the dorsal-fin origin is more anterior in *S. prolatinaris*, with the first dorsal-fin ray anterior to the vertical through the front margin of the upper eye, while in *S. chabanaudi* the first dorsal-fin ray is usually only at or between verticals through the front margin and mid-point of the upper eye.

Some meristic features of *S. prolatinaris* are similar also to those of other eastern Pacific tonguefishes, including *S. callopterus*, *S. leei* Jordan & Bollman, *S. diabolicus*

Mahadeva & Munroe, and *S. microlepis* Garman, although it is possible to readily distinguish *S. prolatinaris* from any of these species. *Symphurus prolatinaris* differs from all four species in having a 1-5-3-2-2 ID pattern (versus 1-3-4-2-2 in *S. callopterus*, 1-4-3-2-2 in *S. leei*, and 1-3-2-2-2 in *S. diabolicus* and *S. microlepis*). *Symphurus prolatinaris* also differs from *S. diabolicus* and *S. microlepis* in having 4 hypurals, a pupillary operculum, and an unpigmented peritoneum (versus 5 hypurals, no pupillary operculum, and a black or spotted peritoneum). *Symphurus prolatinaris* differs further from *S. callopterus* in having uniformly pigmented dorsal and anal fins (versus dorsal and anal fins with a series of alternating pigmented blotches and unpigmented areas), and in the small ctenoid scales on the blind sides of the dorsal- and anal-fin rays (absent in *S. callopterus*). In addition to lacking scales on the blind sides of the dorsal and anal fins, *S. leei* also differs from *S. prolatinaris* in having the head length greater than its width, while in *S. prolatinaris* head length is noticeably shorter than head width.

The combination of a 1-5-3-2-2 ID pattern, 12 caudal-fin rays, pupillary operculum, small scales on the blind sides of the dorsal- and anal-fin rays, and unpigmented peritoneum distinguishes *S. prolatinaris* from all other species of *Symphurus* occurring in Atlantic or Indo-Pacific waters.

#### Additional Material of *S. prolatinaris* Examined

Non-type material examined but not counted or used for morphometric information (64 specimens; 37.8–144.7 mm): Mexico.—SIO 79-11 (12, 54.2–77.8), Salina Cruz, Oaxaca, 16°00'N, 95°09.9'W, 42 m, 6 Apr 1978. SIO 73-257 (22, 42.9–126.7), off NE shore of Golfo de Tehuantepec, 15°30.0–31.0'N, 93°22.0–23.1'W, 23 m, 10 Apr 1973. Costa Rica: SIO 73-298 (30, 37.8–144.7), west coast, SSW off Punta Judas,

eastern point of entrance to Golfo de Nicoya, 9°27.5'N, 84°30.7'W, 31 m, 22 Apr 1973.

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(TAM, MSN) National Marine Fisheries Service Systematics Laboratory, National Museum of Natural History, Washington, D.C. 20560; (MNM) Department of Biology, University of Wisconsin–Oshkosh, Oshkosh, Wisconsin 54901. (All correspondence should be addressed to the first author.)